United States Department of the Interior
Bureau of Land Management

Environmental Assessment
DOI-BLM-CO-N05-2015-0038-EA

Temporary Access and Staging Area for the Black Diamond Mine Fire Excavation Abatement Project

May 2015

U.S. Department of the Interior
Bureau of Land Management
Northwest District
White River Field Office
220 East Market St
Meeker, CO 81641

BLM

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1. INTRODUCTION

1.1. Identifying Information

Project Title: Temporary Access and Staging Area for the Black Diamond Mine Fire Excavation Abatement Project

Legal Description: Sixth Principal Meridian
T. 1 N., R. 94 W.
Section 10, SWSE, E1/2SW
Section 15, Lot 1, N1/2NE,

Applicant: Colorado Division of Reclamation Mining and Safety

NEPA Document Number: DOI-BLM-CO-N05-2014-0038-EA

Casefile/Project Number: COC77025 (Short-term ROW for temporary access road and staging area)

1.2. Background

The Colorado Division of Reclamation, Mining, and Safety (DRMS), as part of their Abandoned Mine Land Program, identified coal seam fires throughout the state and is working on abatement of these coal seam fires. One of DRMS's projects is the Black Diamond Mine Fire Abatement project located on an isolated private parcel surrounded by the BLM managed lands (Figures 1 and 2). This project would require access through BLM managed lands. Records indicate the mine was in operation from 1916 until 1930 when the mine fire was discovered. The burning coal seam has two main surface expressions in the vicinity of collapsed mine entries and has been responsible for wildfire starts in the past. Previous attempts to surface seal the fire have been unsuccessful and DRMS is proposing to quench the burning coal.

1.3. Purpose and Need for Action

The purpose of this action is to allow for access across BLM land to in order to abate a coal seam fire on private land. The need for the action is to improve general public safety by reducing the risk of wildfires which may be started due to surface expression of the coal seam fire.

1.4. Decision to be Made

Based on the analysis contained in this EA, the BLM will decide whether to approve or deny the proposed temporary access and staging area and if so, under what terms and conditions. Under the National Environmental Policy Act (NEPA), the BLM must determine if there are any significant environmental impacts associated with the Proposed Action warranting further analysis in an Environmental Impact Statement (EIS). The Field Manager is the responsible officer who will decide one of the following:

- To approve the temporary access and staging area with design features as submitted;
- To approve the temporary access and staging area with additional mitigation added;
- To analyze the effects of the Proposed Action in an EIS; or
- To deny the temporary access and staging area.

1.5. Conformance with the Land Use Plan

The Proposed Action is subject to and is in conformance (43 CFR 1610.5) with the following land use plan:

Land Use Plan: White River Record of Decision and Approved Resource Management Plan (1997 White River ROD/RMP)

Date Approved: July 1997

Decision Language: "Manage fire to protect public health, safety and property as well as allowing fire to carry out important ecological functions." (page 2-55)

2. PUBLIC INVOLVEMENT

2.1. Scoping

NEPA regulations (40 CFR 1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to identify issues, concerns, and potential impacts that require detailed analysis. Scoping is both an internal and external process.

Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 2/3/2015. External scoping was conducted by posting this project on the WRFO's on-line ePlanning National Environmental Policy Act (NEPA) register on 2/5/2015.

2.2. Public Comment

The EA and the unsigned Finding of No Significant Impact (FONSI) were available for a 14-day public review and comment beginning April 20, 2015 and ending May 4, 2015.

One individual responded to the BLM as a result of the comment period, see Appendix B for the comment and the BLM's response.

3. PROPOSED ACTION AND ALTERNATIVES

3.1. Proposed Action

3.1.1. Project Components and General Schedule

Project Description: The Black Diamond Mine Fire Abatement project, located on an isolated private parcel surrounded by BLM land, would be accessed from the north side of Anderson Gulch, via private and BLM lands (Figures 1 and 2). The fire has two main surface expression locations. Both areas are in the vicinity of collapsed mine entries. The reclamation strategy for the fire is to excavate the entries, quench all burning materials, and seal the portals to reduce/eliminate the surface expression of the fire. The excavated areas would be graded following dig/quench operations, hydrologic controls would be constructed, and the site would be re-vegetated. The temporary access road would be re-contoured and reseeded upon completion of the project. Table 1 contains project specific acreage.

Table 1. Acreage Affected

		Length (Miles)	Affected Area (Acres)	Short Term Disturbance[2] (Acres)	Long Term Disturbance[2] (Acres)
Staging Area[3]		NA	3	0	0
Temporary Access[1]	BLM	1	2	2	0
	Private	0.5	1	1	0
Total		1.5	6	3	0

[1] 15 feet average width
[2] Approximate acreage
[3] Staging area to be used for parking, construction trailer, and temporary storage of equipment, no excavation is anticipated. Entire area identified would not be utilized.

Project Timeline:
Project Design and Planning: January 2015 through April 2015;

Project Bidding: Middle of May 2015, includes site visit with prospective bidders;

Project Construction: September 1 through October 15, 2015, includes all access development, re-contouring, weed spraying, seeding, and any other items relevant to project work.

Staging Area Location: The staging area for the project would be located on lands managed by the BLM within a three acre area along BLM Road 1603 on the ridgeline to the north of Anderson Gulch (Figures 1 and 2). All necessary realty and owner permissions would be acquired by DRMS prior to project bidding. Materials to be stored at the staging area include but are not limited to water for quenching coal, construction materials, construction equipment, a portable toilet, sediment controls, and a construction trailer. No vegetation removal would occur within the staging area.

Water Source/Storage
DRMS is proposing to locate 2 to 3 frack tanks (20,000 gallons/each) in the staging area. These tanks would be filled, as needed, by a water supply truck. Water would be purchased from a municipal source, likely the Town of Meeker. A surface pipeline would be installed adjacent to the constructed access from the staging area to private land above the surface expression of the seam fire. Once on private land a surge tank could be set up and the pipeline installed cross country to the work area. The size of the pipeline would depend on the successful contractor bidder but is expected to be four inches or less in diameter. Initial estimates of water needed to quench the burning coal during excavation is approximately 110,000 gallons. The estimate is based on previous mine fire projects which used 10 gallons of water/foam mixture per cubic yard of burning coal and on the estimated 11,000 cubic yards of burning coal that would be excavated at the Black Diamond Mine site.

Site Access: Access to the site would be via State Highway (SH) 13 to SH 64. West 0.5 miles on SH 64 miles turn north on private road in Lion Canyon up the East Fork 3.1 miles from SH 64 to BLM then 1 mile along BLM roads to the staging area (Figure 1). The proposed temporary access road (Figures 1 and 2) into the Black Diamond Mine Site would be approximately 1.5 miles long and average approximately 15 feet in width, 1 mile on BLM (approximately 2 acres) and 0.5 miles on private land (approximately 1 acre). This access would be as primitive as possible to support project activities and capable of supporting heavy machinery during mobilization and demobilization, and daily traffic for the duration of the project (see Vehicular Use below). The access road would follow a two-track, where possible, and align with the proposed trail system being developed by the WRFO, to the extent possible (Figure 3). Access to the site would require the development of the temporary road on side slopes and switch backs, resulting in cut and fill operations. All cut material would be placed uphill of the road where possible, and protected with sediment controls. This material would be used in road reclamation, following the completion of the project. Topsoil would be scraped off and stockpiled prior to constructing the road. DRMS would work with the WRFO to establish the proper grade and alignment for their proposed trail system upon demobilization and reclamation of the access road. Use of the access road would be limited to authorized personnel only. A locking gate and fence would be installed at the entrance of the access to preclude the general public from using the two track road. Minor road maintenance along the BLM roads and constructed access, including repairing sediment controls and erosion, would be completed by the DRMS contractor, as necessary, throughout the duration of the project. The proposed sections of temporary road and switchbacks are being developed by DRMS engineering consultants, and would be submitted to BLM when completed.

Vehicular Use: The following is a list of anticipated motorized use on the proposed site access road.

Temporary access:
Mobilization/Demobilization (Once in/Once out of the project area):
D5 Dozer;
Medium size excavator (50,000lbs w/1.5yd bucket);
Rubber tired front end loader;

Various equipment for water storage and pumping.

Daily use:
ATVs /OHV for hauling workers;
Pick up or Ranger type OHV for fueling heavy equipment;
Pick up or OHV for hauling materials (cement for shotcrete application).

H 64 to staging area:

Mobilization/Demobilization:
Same as temporary access above.

Daily use:
3 to 4 pick up round trips.

Water Trucks:
30 to 40 total round trips, based on 80 barrel (3,400 gallons) water truck and 110,000 gallons. Could be more or less depending on water truck and actual water usage).

3.1.2. Design Features

Sediment Controls:

1. DRMS includes sediment and erosion controls as a pay item in all construction bids. Sediment controls would be implemented in all areas along the access road and construction areas to limit or eliminate sediment run-off and erosion throughout the duration of reclamation activities and post reclamation revegetation.
    a. ***Temporary Sediment Controls:***
        i. *Ertec S-Fence (14"):* along road cut margins, steep slope areas, and areas devoid of vegetation. It is used in place of traditional silt fence.
        ii. *Straw Wattles:* All straw Wattles would be certified Weed Free. Straw wattles would be placed where appropriate, likely along contour in steep slope graded areas, margins of the road following reclamation, and along the base of soil stockpiles.
        iii. *Water Bars:* Water bars would be utilized where possible along the access road to shed water away from and reduce erosion and maintenance needs of the road.
        iv. *Swales:* Swales would be utilized where necessary to shed water away from soil stockpiles and delicate portions of the access road.
    b. ***Permanent Sediment Controls:***
        i. *Surface Roughening:* The surface of all disturbed areas would be severely roughened using the bucket of the excavator. Surface roughening, utilized in conjunction with re-vegetation methods (seeding and crimping of straw mulch) is an efficient method for establishing vegetation microclimates, and collecting sediment and surface water run-off. Following completion of surface roughening, the site is difficult to walk on, with ridges and valleys one to two feet deep. The access road would be roughened, with the exception of the existing two-track areas (unless otherwise directed by

the BLM), and the portions of the road that would become trail following project completion.

ii. *Rip-Rap:* Rip-rap would be utilized in a few small areas to enhance the final grade and create fire line breaks near the surface expression of the fire (private land). Large boulders may also be utilized within graded areas to create a secure, varying landscape. Rip-rap would not be widely utilized for this project. All rock would be obtained within the project area.

Fire Prevention:

2. This project would have the potential to ignite surface fuels, due to the excavation of burning materials. To prevent surface fires, all excavated coal and surrounding rock, with a surface temperature greater than 100 degrees Fahrenheit (F), would be quenched with a firefighting foam/water mixture. Excavated rock and coal would be cooled to less than 100 degrees F prior to backfill and final grading of excavated and quenched materials. Additionally, all construction crews would have, at a minimum, two five pound Class A fire extinguishers. Additionally, each crew member would be supplied with one sharpened round nosed shovel. These items would be immediately available to the crew members for use should an uncontrolled ignition occur. The BLM and Meeker Fire Response Teams would have access to the site and road throughout the duration of construction.
3. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
    a. The reporting party would inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.

Access Road Reclamation:

4. DRMS would work with the BLM to determine which portions of the road would be reclaimed following completion of the project in order to help facilitate proposed BLM trail making efforts. All new road construction would be removed, and the road surface would be returned to its pre-disturbance grade utilizing the permanent and temporary sediment controls outlined above. The road would be graded, roughened, and revegetated using a site specific, BLM approved seed mix. Topsoil stockpiled during road construction would be placed for the final revegetation surface. Revegetation methods would include surface roughening, amendment application of compost and/or organic fertilizer, seeding with a site specific seed mix, recommended by the BLM, and application of two tons per acre of certified weed free straw mulch, crimped into the surface. A cover crop of sterile barley or wheat would likely be seeded to provide ground cover and provide competition for noxious weed species during vegetation establishment. DRMS is amenable to establishing the trail dimensions and grade, where applicable, and to be determined by the BLM.

Monitoring and Maintenance:

5. Monitoring of final grade and revegetation effectiveness would occur in the spring of 2016, and continue until the site is deemed stable. Weed control would occur, where necessary, along the access road disturbance. Weed control would be contracted, by

DRMS, to a BLM approved weed control contractor. DRMS would complete the necessary maintenance on the access road disturbance until the site is stable and sustainable.

3.1.3. BLM Required Conditions of Approval to Mitigate Impacts to Cultural and Paleontological Resources

1. The applicant is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. The applicant will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The applicant, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
3. Pursuant to 43 CFR 10.4(g), the applicant must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
4. The applicant is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate or other scientifically-important fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
5. If any paleontological resources are discovered as a result of operations under this authorization, the applicant or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

3.2. No Action Alternative

The No Action Alternative constitutes denial of the temporary access and staging area for the Black Diamond Mine fire excavation abatement project. Under the No Action Alternative, none of the proposed project components described in the Proposed Action would take place.

3.3. Alternatives Considered but Eliminated from Detailed Analysis

An alternative with the access from the mouth of Anderson Gulch to the burning coal seam was considered. The alternative was considered not practical due to steep slopes associated with the narrow drainage bottom which would make construction, maintenance, and reclamation of the temporary access technically difficult and problematic.

The BLM also considered an alternative that did not involve construction of any additional access roads. A hand crew and helicopter would be used to drop in needed supplies. Implementation of this alternative would only allow for a temporary surface seal of the burning seam and would not extinguish the fire.

4. ISSUES

The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. The following sections list the resources considered and the determination as to whether they require additional analysis.

4.1. Issues Analyzed

The following issues were identified during internal scoping as potential issues of concern for the Proposed Action. These issues will be addressed in this EA.

- **Air Quality**: The Proposed Action results in the combustion of fossil fuels which could increase carbon monoxide, ozone, nitrogen oxides, nitrogen dioxide, and/or sulfur dioxide and require analysis per The Clean Air Act (CAA) for criteria pollutants.

- **Soil Resources**: The Propose Action would impact NSO-1 and CSU-1 soils.

- **Hydrology**: The proposed road crosses NSO-1 slopes and parallel an ephemeral channel located in Anderson Gulch.

- **Vegetation**: Construction of the proposed roadbed would remove and disturb vegetation along the entire length of the access route and adjacent to it where soils are stockpiled.

- **Invasive, Non-Native Species**: Implementation of the Proposed Action would create disturbed areas that would be vulnerable to establishment of noxious and invasive weeds.

- **Migratory Birds:** Construction activities can result in behavioral and physiological impacts to migratory birds.

- **Terrestrial Wildlife**: Construction activities can result in behavioral and physiological impacts to terrestrial wildlife species.

- **Special Status Animal Species**: Water use for fire abatement can result in depletions to the Colorado River Basin and subsequent impacts to the endangered Colorado River fishes.

- **Visual Resources**: The Proposed Action is located in an area with a Visual Resource Management Class II Objective of retaining the existing character of the landscape. There is potential for the Proposed Action to impact the existing character of the landscape.

- **Forestry and Woodland Products:** The Proposed Action would potentially require the removal of a small number of pinyon and juniper trees along the access route.

- **Recreation:** A portion of the proposed access route to the mine fire is located in the same area as a future non-motorized hiking and biking trail. There is potential for the Proposed Action to impact future trail construction efforts in this area.

- **Access and Transportation**: The Proposed Action is likely to result in a temporary, but substantial, increase in the use of BLM Roads 1602A and 1603 as well a temporary access route to the mine fire.

- **Realty Authorizations:** A short-term right-of-way is required for construction of the temporary access road and staging area.

- **Hazardous or Solid Wastes**: The proposed activities may use regulated materials and would generate some solid and sanitary wastes.

4.2. Issues Considered but not Analyzed

- **Geology and Minerals**: The Black Diamond Mine is located on a 40 acre parcel of fee land (private surface and private minerals). None of the burning coal seam extends on to BLM lands. Access for the Proposed Action would not encumber any oil and gas lease and is located within the area identified as recoverable coal in the 1997 White River ROD/RMP. Considering the short duration of the project along with the amount and type of disturbance associated with the temporary access it is likely impacts to the geologic and mineral resources in the project area would be negligible.

- **Paleontological Resources**: The Proposed Action is located in an area generally mapped as the Iles Formation (Tweto 1979) which the BLM WRFO has classified as a PFYC 4 formation, meaning it is known to produce scientifically noteworthy fossil resources (c.f., Armstrong and Wolny 1989). Given the mitigation measures in place, there would be no impact to paleontological resources.

- **Cultural Resources**: Mountain States Historical (2014) and the WRFO archaeologist (2015) carried out two separate cultural resource inventories at the Class III intensity for the proposed undertaking. The results of the inventories yielded no historic properties in the project area that would be adversely affected by the Proposed Action.

- **Native American Religious Concerns**: No Native American religious concerns are known in the area, and none have been noted by Tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.

- **Social and Economic Conditions**: There would not be any substantial changes to local social or economic conditions.

- **Environmental Justice**: According to the most recent Census Bureau statistics (2010) and guidelines provided in WO-IM-2002-164, there are no minority or low income populations within the WRFO.

- **Prime and Unique Farmlands**: There are no prime and unique farmlands within the project area.

- **Lands with Wilderness Characteristics:** There are no lands identified as having wilderness characteristics within or near the Proposed Action.

- **Wilderness**: There are no designated Wilderness areas or Wilderness Study Areas located near the Proposed Action.

- **Wild and Scenic Rivers**: There are no Wild and Scenic Rivers within the WRFO.

- **Scenic Byways**: There are no Scenic Byways within the project area.

- **Aquatic Wildlife**: There are no aquatic communities that would be influenced by the Proposed Action. The White River, which is the nearest system capable of supporting higher order vertebrate populations, is separated from the project area by nearly two miles of ephemeral channel.

- **Wetlands and Riparian Zones:** There are no wetlands or riparian areas that are known to occur within the project area The nearest BLM administered lands that support riparian communities are located on an adjacent ridge, approximately 1.5 miles away.

- **Surface and Ground Water Quality**: The Proposed Action would result in minimal impacts on surface and ground water processes. The incorporation of temporary and permanent sediment and erosion control features would minimize surface erosion processes and any subsequent decline in surface and/or ground water quality.

- **Floodplains and Water Rights:** Based on United States Corp of Army Engineers (USCAE), 1997 floodplain GIS data, the Proposed Action is not located within a 100 year floodplain. No water rights would be impacted since all water would be purchased from a municipal source, likely the Town of Meeker. Based on BLM WRFO springs/wells 2015 GIS database, no springs or wells nor associated water rights are located in or around the Proposed Action.

- **Livestock Grazing:** Implementation of the Proposed Action would not affect livestock grazing in the Lion Canyon pasture of the Smith Crawford allotment (#06625)because livestock grazing in 2015 is scheduled several months prior to the proposed activities and livestock make minimal if any use in the area surrounding the Proposed Action.

- **Fire Management:** The proposed project is located in the C9 Danforth Hills Fire Management Polygon. With the proximity to wildland urban interface fire managers would aggressively suppress any fires located in this area. In the past couple of years multiple fires have started due to the Black Diamond Mine. The effort of removing the burning coal would greatly reduce the chances of a catastrophic wildfire event occurring. The Proposed Action addresses any concern with a possible fire event occurring and should be handled quickly and efficiently. This project would help prevent future coal seam wildfires from occurring in the area.

- **Wild Horses:** The proposed project would occur in the Smith Crawford allotment, and is more than are more than 16 miles from the Piceance-East Douglas Herd Management Area (PEDHMA). There are several barriers (allotment boundary fences, highway frontage fences, and State Highway 64) between the project area and the PEDHMA. There would be no related impacts to the wild horses in the PEDHMA from this project.

- **Special Status Plant Species**: There are no special status plant species or plant species habitat present in the vicinity of the Proposed Action.

- **Areas of Critical Environmental Concern:** The Proposed Action is not located in or near any ACECs.

5. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

5.1. General Setting & Access to the Project Area

The project area is in Rio Blanco County, Colorado approximately one mile north of Meeker near the head of Anderson Gulch. Access to the site would be via State Highway (SH) 13 to SH 64, to a graveled private road in Lion Canyon to BLM 1602A and to the staging area (Figure 1). Topography of the area consists of steep valleys and ridges ranging in elevation from less than 6,400 feet to over 7,400 feet. The project area is broadly encompassed by scattered, mixed-age pinyon-juniper woodlands interspersed with open mountain shrub, Wyoming big sagebrush and Gambel oak communities.

5.2. Cumulative Impacts Analysis

5.2.1. Analysis Areas

The geographic extent of cumulative impacts varies by the type of resource and impact. The timeframes, or temporal boundaries, for those impacts may also vary by resource. Different spatial and temporal cumulative impact analysis areas (CIAAs) have been developed and are listed with their total acreage in Table 2.

Table 2. Cumulative Impact Analysis Areas by Resource

Resource	CIAA	Total CIAA Acreage	Temporal Boundary
Air Quality	White River Field Office boundary	2.6 million acres	Construction and fire abatement activity timeframes
Soil Resources; Surface and Groundwater Quality; Hydrology, Floodplain, and Water Rights	Anderson Gulch and Sulphur Creek watersheds	12,101 acres	Construction and fire abatement activities through reestablishment of secondary succession vegetation
Terrestrial Wildlife, Raptors	GMU 211 – Winter Concentration/Severe Winter Range	13,840 acres	Construction and fire abatement activity timeframes
Special Status Animal Species (aquatic)	Upper Colorado River Basin	110,000 square miles	Construction and fire abatement activity timeframes
Migratory Bird	Ridge between East Fork of Lion Canyon and Sulphur Creek drainage	3,775 acres	Construction and fire abatement activity timeframes

Forestry and Woodland Products, Vegetation and Noxious and Invasive Weeds	South half of the Lion Canyon pasture of the Smith Crawford allotment	1,948 acres	Construction through reestablishment of desirable vegetation timeframe
Recreation, Transportation and Access, and Visual Resources, Hazardous or Solid Wastes	The isolated BLM parcel where the Proposed Action is located.	1,914 acres	From the first pre-construction activities (equipment staging, flagging, etc.) through meeting reclamation success standards.

5.2.2. Past, Present, and Reasonably Foreseeable Future Actions

Cumulative effects are defined in the CEQ regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

Cumulative impacts from oil and gas development within the WRFO were disclosed in the 1996 White River Resource Area Proposed RMP and Final EIS. A Reasonably Foreseeable Development (RFD) scenario compiled for the 1996 EIS estimated that oil and gas development would occur primarily south of Rangely, would consist of approximately 1,100 single well pads and would result in an estimated surface disturbance of 11,000 acres (10 acres per pad including associated infrastructure).

The BLM estimated actual development to date in 2011. From July 1, 1997 until August 19, 2011, there were 1,132 Federal wells drilled (including Federal wells drilled from fee pads). During that same time period, there were 261 plugged and abandoned wells and 375 abandoned wells. The BLM estimated surface disturbance associated with oil and gas development to be 9,165 acres and reclamation to be 783 acres (assumed 3 acres per plugged and abandoned location).

In 2012 the BLM published the Oil and Gas Development Draft RMP Amendment/EIS which considered changes in the location, type, and level of oil and gas development within the resource area. Based on an updated 2007 RFD scenario, it is assumed that the majority (95 percent) of oil and gas development would occur within the Mesaverde Play Area (MPA; Piceance Basin) and consist of multi-well pads. The preferred alternative in the Draft RMPA/EIS considered drilling up to 15,042 wells from 1,800 well pads with an associated surface disturbance of 21,600 acres (see Table 2-1, Record 13 of the Draft RMPA/EIS). An estimated 12 acres per pad would be disturbed initially (including areas needed for associated infrastructure) however that would be reduced to 5 acres per pad following interim reclamation (see Table 4-2 of the Draft RMPA/EIS). Further, it was assumed there would be up to 1,295 miles of roads and 925 miles of utility lines (pipelines and power lines) developed to support this activity (see Table 4-3 of the Draft RMPA/EIS).

As of March 2014, the Colorado Oil and Gas Conservation Commission database indicated there were a total (i.e., including those drilled prior to the 1997 RMP) of 2,562 producing wells, 320 shut-in wells, and 84 wells where drilling has begun but are not yet in production.

This project is located outside of the MPA. The BLM assumed that only 5 percent of oil and gas development would occur outside of the MPA and that it would be primarily limited to single-well pads.

Other past, present, and reasonably foreseeable actions in the project area include livestock grazing and associated range improvement projects, vegetation treatments, and both wildfires and prescribed burns. Recreation use is characterized by hiking and biking.

5.3. Air Quality

5.3.1. Affected Environment

The Proposed Action is located in the Western Slope Region on the far western boarder of Colorado. The Western Slope Region includes the cities of Meeker and Rangely. A mix of mountains on the east, and mesas, plateaus, valleys and canyons to the west form the landscape of this region. The Western Slope, along with the central mountains, are projected to be the fastest growing areas of Colorado through 2020 with greater than two percent annual population increases, according to the Colorado Department of Local Affairs.

The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) set National Ambient Air Quality (NAAQ) standards (40 CFR part 50) for criteria pollutants. The six criteria pollutants are carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and particulate matter which are currently split into $PM_{2.5}$ and PM_{10} size fractions. Criteria pollutants are air contaminants that are commonly emitted from a majority of emission sources. Local air quality parameters including $PM_{2.5}$ and PM_{10} and O_3 are measured at monitoring sites located outside Meeker, Rangely, Dinosaur National Monument, and near the Flat Tops Wilderness Area. Currently, all of the Western Slope regions comply with NAAQ standards (CDPHE 2013).

5.3.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The Proposed Action would result in localized short-term impacts on air quality during the construction and fire mitigation activities due to the combustion of fossil fuels but is not expected to result in an exceedance of NAAQ and Colorado ambient air quality (CAAQ) standards.

Cumulative Impacts

The cumulative impacts from the Proposed Action in Rio Blanco County would be similar to the No Action with the benefit of an expected reduction in CO emissions due to the quenching of the Black Diamond Mine fire.

5.3.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

The localized short-term impacts on air quality during the road construction and fire mitigation activities discussed in Section 3.1.1 would not occur under this alternative. However, the continued burning of the Black Diamond Mine could result in continued or increased emissions of greenhouse gases including carbon dioxide (CO_2) and methane (CH_4) as well as mercury (Hg), carbon monoxide (CO), and other toxic substances (USGS 2009).

Cumulative Impacts

The cumulative impacts from the No Action Alternative include emissions from abandoned coal mine fires, motor vehicles, oil and gas development, coal-fired power plants, windblown dust from livestock and gravel pits, and wildfires/prescribed burns in Rio Blanco County.

Due to these emission sources in the White River and in the nearby Uinta and Yampa River Basins, criteria pollutants are expected to increase into the future. With the possible exception of ozone, the overall air quality in Rio Blanco County is expected to meet NAAQ standards for criteria pollutants.

5.4. Soil Resources

5.4.1. Affected Environment

The Proposed Action affects Blazon, moist-Rentsac complex, Jerry–Thornburgh–Rhone complex, and Rock Outcrop soils. The Blazon and Jerry-Thornburgh-Rhone soils have weathered predominantly from shale and are composed of channery loam and clay resulting in low-moderate permeability and slow-high runoff with slight-high erosion characteristics. The Jerry-Thornburgh-Rhone complex soil is classified as a landslide soils (NSO-01) and the Blazon, moist-Rentsac is classified as a fragile soil (CSU-1).

NSO-01 soils are considered unstable and subject to slumping and mass movement. Surface occupancy would not be allowed in such areas but the Area Manager may grant an exception and authorize surface occupancy if an environmental analysis finds the nature of the Proposed Action could be conditioned so as not to impair the stability of the landslide areas.

Controlled surface use (CSU-1) encompasses fragile soils on slopes greater than 35 percent. Surface disturbing activities would be allowed only after engineered construction-reclamation plan is submitted by operator and approved by the Area Manager. An exception may be granted by the Area Manager if an environmental analysis of the Proposed Action identifies that the scale of the operation would not result in any long-term decrease in site productivity or increased erosion.

The proposed road route, with a 30 feet buffer, would impact 0.7 acres (0.1 miles) of soils classified as both NSO-01 (landslide) and CSU-1 (fragile > 35 percent), 1.9 acres (0.1 miles) of landslide soils , and 0.9 acres (0.4 miles) of fragile soils. The road grade ranges between 0 to 10 percent.

5.4.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

Soil impacts from the Proposed Action include removal of vegetation, mixing of soil horizons, soil compaction, destruction of subsurface preferential water flow paths, increased susceptibility to surface erosion due to loss of structure and vegetative cover, and loss of topsoil productivity.

The impacts would be limited to the road base and surrounding soil surfaces paralleling the proposed road routes due to the placement and compaction of fill material for the balanced cut/fill road bed design and subsequent retrieval during reclamation activities. The temporary and permanent erosion control features detailed in Section 3.1 would minimize the impacts from the possible increase in surface erosion and rilling due to the exposed soils during the construction, usage, and reclamation activities.

The road is a temporary disturbance permitting access to the Black Diamond Mine and would be reclaimed immediately following the fire abatement activities. During construction, the earthwork would follow the guidelines detailed in the BLM'sanual Primitive Road Design Handbook (H-9115-1) which would limit the time and extent of impacts to the identified NSO-01 and CSU-01 soils.

Cumulative Impacts

The Proposed Action would not be expected to add substantially to existing or foreseeable future disturbances. Roughly 0.50 miles of the proposed access road would be incorporated into Trail 1 of the Meeker Master Trails Plan, which is scheduled to be constructed as early as 2016. The rough cut for this section of the trail would be constructed during the reclamation of the Proposed Action utilizing the same balanced cut/fill design. The impacts to the soil resources for this trail section would be similar to the Proposed Action but to a lesser extent given the limited tread width. By following the guidelines and techniques from the "USDA Forest Service Trail Construction and Maintenance Notebook, 2007", and the "International Mountain Bicycling Association (IMBA) Trail Solutions: IMBA's Guide to Building Sweet Singletrack" for the construction, maintenance and use would limit impacts to NSO-01 soils.

5.4.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

In the No Action Alternative, the previously discussed impacts to the soil resources would not occur.

Cumulative Impacts

No changes would occur that would have any cumulative impact to soils in the project area.

5.4.4. Mitigation Measures and Residual Impacts

1. Given the temporary nature of the road, the backslope grade should be as steep as the soil material would permit. A backslope of ½:1 to ¾:1 should be adequate.

5.5. Hydrology

5.5.1. Affected Environment

The Proposed Action would result in the construction of 1.3 miles of road in steep terrain. The proposed road route impacts 0.4 miles of slopes greater than 35 percent. To minimize cut depth in undisturbed hillslopes, when feasible, a balanced cut/fill road base design would be utilized. The road base would be outsloped and dips would be incorporated into the road surface to minimize the pooling and subsequent infiltration of surface waters on the road base.

The excavation of the undisturbed hillslope would result in the interruption of preferential subsurface flow paths (macropores) including freeze-thaw cracks, small animal burrows, interaggregate soil spaces, and decayed root channels. Macropores are important subsurface features for downslope movement of water in unsaturated hillslope soils. Also, the removal of overlying vegetation and destruction of subsurface roots would result from the excavation of the existing undisturbed hillslopes.

5.5.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

As discussed in the affected environment section, the excavation of existing undisturbed hillslopes would result in the removal of existing tree root network. Tree roots contribute to the stability of hillslopes by acting as an anchor through the soil mass and facilitate the rapid subsurface drainage of infiltrated precipitation through the macropores formed by decayed roots minimizing saturated or perched water tables that contribute to hillslope instability. Road cuts interrupt subsurface preferential flow in these macropores and can result in localized saturated soil profiles upslope of the cut which promotes slope destabilization. The incorporation of grade dips and an outsloped road surface should promote the rapid draining of this interrupted subsurface downslope water and rainfall falling on the road surface.

Cumulative Impacts

The Proposed Action would not be expected to add substantially to existing or foreseeable future disturbances. Roughly 0.50 miles of the proposed access road would be incorporated into Trail 1 of the Meeker Master Trails Plan, which is scheduled to be constructed as early as 2016. The rough cut for this section of the trail would be constructed during the reclamation of the Proposed Action utilizing the same balanced cut/fill design. The impacts to the soil resources for this trail section would be similar to the Proposed Action but to a lesser extent given the limited tread width. Following the guidelines and techniques from the "USDA Forest Service Trail Construction and Maintenance Notebook, 2007", and the "International Mountain Bicycling Association (IMBA) Trail Solutions: IMBA's Guide to Building Sweet Singletrack" for the construction, maintenance and use would limit impacts to NSO-01 soils.

5.5.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

In the No Action Alternative, the previously discussed impacts to the hillslope hydrology would not occur.

Cumulative Impacts

No changes would occur that would have any cumulative impact to the hillslope hydrology in the project area.

5.5.4. Mitigation Measures and Residual Impacts

1. Earthwork Design: When feasible, a balanced road design is encouraged. Refer to BLM's Primitive Road Design Handbook (H-9115-1).
2. In order to divert water from road surface, the incorporation of grade dips should be utilized to prevent pooling and rilling on the road surface. Dip spacing is dependent on road grade and should comply with the BLM's Primitive Road Design Handbook (H-9115-1) with spacing approximately every 300 feet.

5.6. Vegetation

5.6.1. Affected Environment

The proposed temporary access route crosses through mostly a steep mid-seral pinyon-juniper woodland ridge and to a lesser extent through a steep brushy loam hillside. A summary of observed vegetation classes is shown in Table 3.

Table 3. Ecological Sites/Vegetation Classes Present on Proposed Temporary Access Route

Rangeland Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Brushy Loam	Deciduous Shrub / Grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Pinyon-Juniper	Pinyon-Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

5.6.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

Access route construction would directly affect vegetation by removing or disturbing vegetation on approximately two acres comprised mostly of pinyon-juniper woodlands, and mountain shrubland. Herbaceous vegetation at the staging area would likely be crushed and disturbed by heavy vehicle traffic but should, unless disturbance is too severe, recover and regrow the

following summer. Where disturbance occurs soils could be damaged due to erosion, mixing of soil horizons, compaction, or contamination. Noxious/invasive plant species could become an increased component of affected plant communities due to ground disturbance and seed dispersal in the area and could spread into surrounding plant communities.

Successful reclamation of disturbed areas would establish early-seral herbaceous plant communities within two to three growing seasons. Livestock generally do not access this area so there would be no or minimal grazing related impacts to seeded vegetation. Prompt reclamation and seeding in the fall should contribute to successful vegetation establishment

Cumulative Impacts

The disturbance associated with the proposed access route and staging area, when added to other nearby projects would result in a minor increase in the short-term removal of existing vegetation on public land. The proposed staging area and access route would not result in a noteworthy increase in vegetation disturbance or long-term changes in affected or nearby plant communities.

5.6.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

Under the No Action Alternative there would be no vegetation disturbance associated with construction of the proposed temporary access route and use of the identified staging area. However there is an increased likelihood of wildfire ignition by allowing the coal seam fire to continue burning. This scenario has potential to affect many more acres of vegetation than the proposed project.

Cumulative Impacts

Under the No Action Alternative cumulative impacts would be similar to those described for the Proposed Action. If a wildfire ignition occurred there could be an increase in the number of acres where vegetation would be altered.

5.6.4. Mitigation Measures and Residual Impacts

1. For reclamation of disturbed areas BLM recommends the seed mix shown in Table 4.

Table 4. Reclamation Seed Species List

Cultivar	Common Name	Scientific Name	Application Rate (lbs PLS/acre)
Arriba	Western Wheatgrass	*Pascopyrum smithii*	4
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	3.5
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata* ssp. *inermis*	4
Lodorm	Green Needlegrass	*Nassella viridula*	2.5
See alternate*	Sulphur Flower Buckwheat	*Eriogonum umbellatum*	1.5

*Arrowleaf Balsamroot (*Balsamorhiza sagittata*) may be substituted for the Sulphur Flower Buckwheat

2. If straw is used to mulch reclaimed areas it must be certified weed-free and special attention should be paid to watch for and treat any weed species, especially jointed goatgrass (*Aegilops cylindrica*) that might have been introduced with the straw. Because of recent accidental introductions of jointed goatgrass with the use of straw mulch during reclamation activities, the BLM recommends using a different mulch product such as woodstraw or mulching with chipped material removed during route construction.
3. After recontouring, seedbed preparation and seeding, stockpiled woody material should be scattered across the reclaimed area where the material originated. Chipped material should be scattered across reclaimed areas in a manner that avoids developing a thick mulch layer that would suppress growth of desirable vegetation.
4. Trees or shrubs that must be removed for access route construction must be cut down or masticated to a stump height of six inches or less prior to other heavy equipment operation. Woody materials required for reclamation would be stockpiled and stored separately from stockpiled topsoil and may be positioned along the margins of the access route. Smaller limbs and trees may be chipped and stockpiled if needed for reclamation or may be placed back on the reclaimed surface whole. Boles, limbs, and other large woody material should be retained for redistribution not to exceed 30 to 40 percent total ground cover.
5. To be deemed successful, reclamation of the access route must result in a self-sustaining plant community of at least five desirable plant species where no one species exceeds 70 percent relative cover. Desired foliar cover, bare ground, and shrub and/or forb density must have 80 percent similarity in relation to the identified range site in an early-seral (herbaceous) condition.
6. Reclaimed areas must be free of noxious and undesirable invasive weeds, construction debris, and trash.
7. Soils must be stabilized to a point where there is no evidence of excessive erosion such as slope or soil instability, subsidence, or slumping on any of the reclaimed access route (as compared to the range site description).
8. All equipment that may act as a vector for weeds would be cleaned before entering the WRFO.

5.7. Invasive, Non-Native Species

5.7.1. Affected Environment

The Colorado Noxious Weed Act (Title 35 Article 5.5, enacted 1996) defines noxious weeds as plant species that are not indigenous to the State of Colorado and which aggressively invade or are detrimental to economic crops or native plants; are poisonous to livestock; are carriers of detrimental insects, diseases, or parasites; or the presence of the plant is detrimental to the environmentally sound management of natural or agricultural ecosystems. Recognized noxious weeds are grouped into three categories: Lists A, B, and C (Colorado Weed Management Association 2009). List B includes species for which a state noxious weed management plan is required to stop their spread. List C includes species that are common in Colorado. Optional programs provide resources to governing bodies that choose to require management of List C species, however, prevention of these weed species is not state-mandated (CWMA 2009).

There are several List "B" noxious (weed) species known to occur in the general area surrounding the proposed project. There are occurrences of houndstongue (*Cynoglossum officinale*), diffuse knapweed (*Centaurea diffusa*), leafy spurge (*Euphorbia esula*), and musk thistle (*Carduus nutans*) throughout the general area surrounding the proposed project. Diffuse knapweed is spreading along the main road up the bottom of East Fork of Lion Canyon. Cheatgrass a State "C" list species is also present at low levels in the general area of the proposed project. Most weeds listed occur in association with disturbance including roads and trails.

5.7.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

Construction of the proposed access route (approximately two acres on BLM lands and one acre on private lands) and use of the staging area would disturb vegetation and would create suitable conditions for establishment of weeds. Noxious weeds could be spread by equipment. Cheatgrass establishment is very likely unless disturbed areas are quickly and thoroughly revegetated with desirable species. Proposed reclamation actions including re-contouring, roughening, seeding, mulching, and weed control should minimize the threat of noxious weed establishment and spread. The proposed timeline where all work would be completed in the fall of 2015 would reduce the risk of weed establishment by minimizing timeframe that disturbed soils are left unvegetated. As addressed at Section 3.1.2 in the Monitoring and Maintenance section, weed control would occur where necessary along the access road disturbance.

Cumulative Impacts

Noxious and invasive weeds present in the general area surrounding the proposed project are primarily associated with disturbance. Disturbance associated with the proposed access route, staging area and mine site would create additional opportunity for noxious/invasive weed establishment. Existing roads and development related disturbances throughout the general area are common sources of weeds. Elimination of some species such as cheatgrass from the general area is unlikely. The extent of infestation and persistence of weeds would be dependent on monitoring and treatment as part of this and future projects in the area. Reclamation including using weed-free straw, monitoring, and weed control through adequate establishment of desired vegetation in all disturbed sites associated with this project would reduce risk of long term negative impacts associated with the Proposed Action.

5.7.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

Under the No Action alternative no disturbance would occur as proposed for the staging area, access route construction, and extinguishing activities. There would be no increased risk of weed spread in the general project area.

Cumulative Impacts

Cumulative effects would be similar to those of the Proposed Action.

5.7.4. Mitigation Measures and Residual Impacts

1. Application of herbicides must comply with the *Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environments Impact Statement* (EIS), and the WRFO Integrated Weed Management Plan (DOI-BLM-CO-110-2010-0005-EA).
2. All seed, straw, mulch, or other vegetative material to be used on BLM and split-estate lands will comply with United States Department of Agriculture (USDA) state noxious weed seed requirements and must be certified by a qualified Federal, State, or county office as free of noxious weeds. Any seed lot with test results showing presence of State of Colorado A or B list species will be rejected in its entirety and a new tested lot will be used instead.
3. All areas identified to be disturbed under this proposal will be monitored and treated for noxious weeds on an annual basis until final reclamation has been approved by the Authorized Officer.
4. Pesticide Use Proposals (PUPs) must be submitted to and approved by the BLM before applying herbicides on BLM lands. The PUP will include target weed species, the herbicides to be used, application rates and timeframes, estimated acres to be treated, as well as maps depicting the areas to be treated and known locations of weeds. The WRFO recommends that all PUPs be submitted no later than March 1st of the year anticipating herbicide application.
5. Pesticide Application Reports (PAR) will be provided to the BLM annually, usually in the fall at the end of annual weed treatment. The PAR will include operator name, PUP number, applicator name(s), application date, timeframe of application, location of application, type of equipment used, pesticide used including manufacturer and trade name, formulation, application rate in terms of active ingredient per acre, acres treated, primary species treated, stage of plant development, and weather conditions during treatment.

5.8. Migratory Birds

5.8.1. Affected Environment

The project area is broadly encompassed by scattered, mixed-age pinyon-juniper woodlands interspersed with open mountain shrub, Wyoming big sagebrush and Gambel oak communities. The herbaceous understory is well intact and largely comprised of native species (Junegrass, bluebunch wheatgrass). Japanese brome and cheatgrass are present, but generally occur in small, isolated patches.

Dozens of bird species use these woodland, grassland and shrubland communities during the breeding season (generally May 15 – July 15). Forty-two bird species have been documented in the area including: black-throated gray warbler, black-chinned hummingbird, lark sparrow, MacGillivray's warbler, house wren, lazuli bunting, plumbeous vireo, ash-throated flycatcher, canyon wren and dusky grouse. Birds of conservation concern and/or BLM sensitive species that

were documented in the area include peregrine falcon, pinyon jay, and juniper titmouse and Brewer's sparrow.

5.8.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The Proposed Action would result in the direct loss or alteration of three acres (two acres on BLM lands, one acre on private lands) of predominantly mountain shrub and pinyon-juniper woodlands. With proper and effective reclamation, this disturbance could be reduced to near pre-construction conditions. The direct loss of roughly three acres would not be expected to have any substantial influence on migratory bird populations. Noise and human presence associated with road construction and activities associated with fire abatement would be expected to result in displacement of adults, and may even lead to complete nest abandonment and mortality of nestlings. Indirectly, construction activities (noise, human presence) during the breeding season could influence functional nesting habitat up to 100 meters off the access, as birds would tend to avoid these areas. Because construction activities are scheduled to take place outside of the migratory bird nesting season, these impacts would largely be eliminated. Of concern is the potential for the spread of non-native, invasive species. In general, annual dominated communities provide suboptimal forage and cover resources for most nesting birds.

Cumulative Impacts

The Proposed Action would not be expected to add substantially to existing or foreseeable future disturbances. Roughly 0.50 miles of the proposed access road will be incorporated into Trail 1 of the Meeker Master Trails Plan, which is scheduled to be constructed as early as 2016. Particularly with prompt and effective reclamation, the Proposed Action would not be expected to result in reductions in the quality of habitat(s) that support migratory bird nesting functions.

5.8.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

There would be no direct or indirect impacts to migratory birds or habitats that support nesting functions under the No Action Alternative.

Cumulative Impacts

There would be no additional contributions to the loss or alteration of habitats that would potentially impact migratory birds under the No Action Alternative.

5.8.4. Mitigation Measures and Residual Impacts

1. Construction activities associated with the Proposed Action (i.e., road construction, fire abatement activities etc.) will be conducted outside the migratory bird nesting season of May 15 through July 15.

5.9. Terrestrial Wildlife

5.9.1. Affected Environment

The mountain shrub, grassland, and pinyon-juniper woodlands that encompass the entire project area are classified by Colorado Parks and Wildlife (CPW) as mule deer severe winter range, a specialized component of winter range that virtually supports an entire herd during the most extreme conditions (snow depth, temperature, etc.). These ranges are most heavily used from December through April.

Mature components of pinyon-juniper woodlands which lie along the proposed access road may provide suitable nesting substrate for woodland raptors such as sharp-shinned hawk, Cooper's hawk, red-tailed hawk, long-eared owl and saw-whet owl. Rock outcrops scattered throughout the southern portion of the project area may provide suitable nesting substrate for red-tailed hawks and great-horned owls.

There is a known peregrine falcon nest roughly 0.80 miles from the project area. This species is known to exhibit strong nest fidelity therefore it is unlikely that this pair would relocate. However, it should be noted that cliff bands in and around the project area may provide suitable nesting substrate for this species.

The distribution and abundance of small mammal populations are poorly documented within the Resource Area. Recent trapping efforts undertaken throughout Piceance Basin indicate a high tendency in both sagebrush and pinyon-juniper communities for more generalized species such as deer mouse and least chipmunk and it is suspected that these species would be relatively abundant in the project area. Non-game populations associated with these upland communities, particularly dense mountain shrub basins that retain more fully developed understories, likely occur at densities that approach habitat potential. There are no small mammal species that are narrowly endemic or highly specialized species known to inhabit the project area.

Dusky grouse are found in the mixed mountain shrub and grassland communities throughout the project area. Additionally, larger carnivore species including black bear and mountain lion are also found in the project area.

5.9.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The Proposed Action would result in the direct loss/modification of approximately three acres (two acres of public lands, one acre of private lands) of woodland and shrubland habitats. Following proper and effective reclamation loss of habitat would be negligible. Although mule deer are present throughout the year, it is unlikely the project area experiences considerable big game use during the summer months due to the limited amount of water in the area. Most use is concentrated during the late-fall and winter/spring months. Construction activities during the winter months would be expected to result in behavioral and physiological impacts (temporary avoidance of area, increased energy demands etc.) to local big game species. As proposed,

construction and work-related activities are scheduled to take place during the fall, thus greatly reducing impacts to big game. Vegetation disturbance (i.e., road construction) can lead to the spread of invasive, non-native species. In general, annual dominated communities detract from the quality of forage and cover resources available for big game and nongame species.

Direct involvement with woodland habitat would be minimal as much of the proposed access road skirts the woodlands edge. Indirectly, noise and human activity associated with the Proposed Action may result in displacement of adults, abandonment of nest stands and possible mortality of eggs and nestlings. Because construction activities and project work are scheduled to take place outside of the migratory bird nesting season, these impacts would largely be eliminated. A raptor survey will be conducted by the WRFO wildlife staff the breeding season prior to construction. If an active nest is located, the appropriate timing stipulations will be applied. Trees capable of supporting nest structures, generally those that are greater than or equal to 8 inches dbh (diameter at breast height) should be avoided (i.e., not removed). If there is potential for direct involvement with a nest (within 50 meters), a re-route of the proposed route may be necessary. Similarly, should an active nest be found in the surrounding cliff bands, appropriate timing stipulations will be applied with potential for a re-route of the access road.

Cumulative Impacts

The Proposed Action would not be expected to add substantially to existing or foreseeable future disturbances. Roughly 0.50 miles of the proposed access road would be incorporated into Trail 1 of the Meeker Master Trails Plan, which is scheduled to be constructed as early as 2016. Particularly with prompt and effective reclamation, the Proposed Action would not be expected to result in reductions in the quality of habitat(s) that support terrestrial wildlife species.

5.9.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

There would be no direct or indirect impacts to terrestrial wildlife species under the No Action Alternative.

Cumulative Impacts

There would be no additional contributions to the loss or alteration of habitats that may influence terrestrial wildlife species under the No Action Alternative.

5.9.4. Mitigation Measures and Residual Impacts

1. Construction activities will not be allowed from December 1 through April 30 to avoid disturbance to big game during the critical winter use period.
2. A raptor survey will be conducted by WRFO wildlife staff the breeding season prior to road construction. If an active nest is located, no construction activities will be permitted within 0.25 miles (400 meters) of the nest from February 1 through August 15 or until young have fledged. Construction activities will be allowed from August 16 through January 31. Should a nest be located along or in close proximity (50 meters) to the proposed road, a re-route of the road may be necessary.

5.10. Special Status Animal Species

5.10.1. Affected Environment

There are no threatened or endangered animal species that are known to inhabit or derive important use from the project area. The endangered Colorado pikeminnow occurs in the White River below Taylor Draw Dam and Kenney Reservoir (roughly 30 river miles downstream from the project area), although the White River and its 100-year floodplain from Rio Blanco Lake to the Utah state line are designated critical habitat for the fish. The White River in Colorado does not appear to support spawning activity, young-of-year nurseries, or juvenile concentration areas for the Colorado pikeminnow. Additionally, while the listed bonytail, humpback chub, and razorback sucker do not occur in the White River, its flow contributions are important in supporting these species' downstream habitats in the Green River.

BLM sensitive species that may occur in the project area include Brewer's sparrow and peregrine falcon. These species are addressed above in the Migratory Bird and Terrestrial Wildlife sections.

5.10.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

Water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback. Proposed water use for this project would result in the depletion of an estimated 0.34 acre-feet of water from within the Colorado River Basin and would fall under BLM Colorado's Programmatic Biological Assessment (PBA) for water depleting activities (excluding fluid minerals development) on BLM lands in the Colorado River basin in Colorado (BLM 2008). A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy and aid in recovery efforts for these endangered fishes resulting from water depletions from the Colorado River Basin. The PBO addresses internal and external BLM projects including impoundments, diversions, water wells, pipelines, and spring developments. The U.S. Fish and Wildlife Service (FWS) determined that projects that fit under the umbrella of the PBO would avoid the likelihood of jeopardy and/or adverse modification of critical habitat for depletion impacts to the Upper Colorado River Basin if they deplete relatively small amounts of water (less than 100 AF) and BLM makes a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by each project. The PBO instructed BLM to make an annual payment to the National Fish and Wildlife Foundation (NFWF) to cover all BLM authorized actions that result in water depletions. The Black Diamond Mine Fire Abatement Project would deplete 0.34 AF annually. The depletion fee for this project is $6.98. This project has been entered into the White River Field Office water depletion log which would be submitted to the Colorado State Office (COSO) at the end of the Fiscal Year. The COSO is responsible for paying depletion fees based on the annual statewide total.

Cumulative Impacts

Cumulative impacts would be similar to those discussed above under Direct and Indirect Impacts. This project would result in the additional depletion of 0.34 acre-feet of water from the Colorado River Basin.

5.10.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

There would be no direct or indirect impacts to special status species under the No Action Alternative.

Cumulative Impacts

There would be no additional loss or alteration of habitat that would potentially impact special status animal species under the No Action Alternative.

5.10.4. Mitigation Measures and Residual Impacts

The BLM - COSO will make a one-time contribution of $6.98 to the NFWF to cover the depletion fee for this project. The Black Diamond Mine Fire Abatement Project has been entered into the White River Field Office water depletion log which would be submitted to the Colorado State Office (COSO) at the end of the Fiscal Year.

5.11. Visual Resources

5.11.1. Affected Environment

The Proposed Action is located in a BLM-designated Visual Resource Management (VRM) Class II area. The objective of VRM Class II lands is to retain the existing character of the landscape and the level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Changes in VRM Class II areas should repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Most BLM lands within the view shed of the town of Meeker fall within the VRM Class II category. The visual resource inventory (VRI) process described in BLM Manual H-8410-1 establishes VRI classes, which are used to assess visual values for areas of the landscape and are used to analyze impacts or changes from this baseline assessment. The Proposed Action is located in VRI Class II area, which means this area is a moderate to higher valued scenic landscape with few visible management activities in the area.

The approximately 1,914 acre BLM parcel where the Proposed Action is located rises from valley floors on three sides from 6,300-6,700 feet in elevation to ridges with elevations of 7,100-7,400 feet. The Sulphur Creek valley is located on the east side with Lion Canyon valley on the west side and the White River Valley and the Town of Meeker on the south side. The topography consists of steep v-shaped drainages with rocky buff colored slopes that typically have one or more red or white horizontal cliff bands located mid-slope. When viewed from a distance,

pinyon and juniper trees provide dark green color contrast with the buff colored soils and rocks. Grasses, mountain shrubs, and oak brush along with the pinyon and juniper trees provide texture to the landscape. Management activities on this parcel include: eight communication sites located on a high point near the end of the prominent west ridge known as Lobo Mountain, a Federal Aviation Agency (FAA) air traffic control site on the highest point of this parcel and near the proposed staging area, four miles of two-track roads, four miles of pedestrian and hiking trails, several overhead utility power lines, and some fences and livestock tanks.

The Proposed Action is likely to be viewed by those in and around the Town of Meeker, by those traveling along State Highway 13 through the Town of Meeker, and by trail users on the nearby hiking and biking trail system. There are very few select angles or viewpoints that would allow casual observers to view only a 0.25 mile portion of the access road that crosses the top of Anderson Gulch drainage. The rest of the Proposed Action would not be viewable to anyone traveling on a road, trail, or any other place in the Town of Meeker.

5.11.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The staging area may be noticeable to those traveling on the existing trail system only for a short distance where the trail crosses the east ridge of Anderson Gulch. This would be a short-term temporary impact that may last up to a few months from late August through October. The access road construction activities, road corridor cut and fill, road vehicle use, and road reclamation activities of the 0.25 mile viewable portion of the access road are likely to be noticeable by those traveling in the same trail area as above. Trail users may notice this project from a distance of approximately 0.8 miles. Select areas in town and along SH 13 that provide a view of the 0.25 mile portion proposed access road are located at a distance of approximately 1.5 to 2.5 miles. The Proposed Action is likely to not be noticeable or attract attention by casual observers in these areas. The access road is proposed to be in place for approximately two months and then reclaimed after mine fire project has been completed which includes being re-contoured, mulched, fertilized, and seeded. This 0.25 mile linear disturbance may be noticeable for several years by those traveling on the existing trail system. However, this portion of the proposed access road is likely to have a hiking and biking trail constructed within the same ground disturbance area and used as part of the trail system within the next year or so. This area is planned to have the same alignment as Trail 1 (East Ridge Trail) in the Meeker Master Trails Plan (DOI-BLM-CO-NO5-2014-0116-EA). Therefore, this future trail would create another linear disturbance in this area over the long term, but would be more narrow, and should blend with the landscape over time. Overall the Proposed Action is likely to not attract long-term attention by casual observers, would retain the existing character of the landscape, and would meet VRM Class II Objectives and would not change the VRI Class II rating.

Cumulative Impacts

This parcel has a variety of management activities that are seen by casual observers but do not necessarily attract attention. These include eight communication sites, a FAA air traffic control site, fences, stock ponds, and four miles of two-track road and four miles of trails. The Proposed

Action would temporarily and incrementally increase the amount of management activities that may be viewed by casual observers in this area. However, the Proposed Action would largely blend with the existing character of the landscape over time and would not likely be perceived as noticeable in the context of this landscape.

5.11.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

By not constructing any access road into the mine there would be no road corridor disturbance noticeable in the upper Anderson Gulch. However, there would likely be a hiking and biking trail constructed in this area within the next few years. This would result in a more narrow ground disturbance corridor, but a somewhat similar linear disturbance in the same area. Therefore, this alternative would result in similar long term visual impacts as the Proposed Action.

Cumulative Impacts

There are no cumulative impacts to visual resources identified as a result of this alternative.

5.12. Forestry and Woodland Products

5.12.1. Affected Environment

The proposed access road would traverse approximately 0.5 miles of mid to late seral pinyon-juniper woodlands. Vegetation associated with the pinyon-juniper ecological site includes pinyon and juniper trees in the overstory with an understory of Indian ricegrass, beardless bluebunch wheatgrass, Utah serviceberry, mountain mahogany, big sagebrush, antelope bitterbrush, needle and thread, western wheatgrass, and bottlebrush squirreltail.

5.12.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The construction of the temporary access road would likely require the removal of approximately 50-100 pinyon and juniper trees to get equipment down the road. Removal of pinyon and juniper trees would be considered long-term due the time required for trees to re-establish after being cut. Disturbance from road construction and use could also lead the potential introduction of noxious and invasive weeds to the area (See Invasive, non-native species section).

Cumulative Impacts

Past and present disturbance to pinyon-juniper woodlands is primarily from previous road development, the FAA communication site, and radio towers southwest of the Proposed Action. Future actions include the potential development of the trail system for hiking and biking in the area. Cumulative impacts from this Proposed Action are expected to be nominal from the 50 to 100 trees expected to be removed relative to the size of the analysis area.

5.12.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

The No Action Alternative is expected to have no impacts to pinyon-juniper woodlands from road construction, however if they can't access the abandoned mine site to put out the coal seam fire, there is an increased risk for a wildfire in the area that could impact many acres of pinyon-juniper woodlands.

Cumulative Impacts

Past and present impacts from the no action alternative are similar to the Proposed Action. The potential cumulative impacts from the no action alternative going into the future could potentially lead to a large loss of pinyon-juniper woodland in the analysis area if a large wildfire is started from the coal seam. Potential losses are hard to predict as a result of a wildfire, because wildfire behavior is highly variable and hard to predict.

5.13. Recreation

5.13.1. Affected Environment

The parcel where the Proposed Action is located consists of approximately four miles of mountain biking and hiking trails on BLM lands known as the China Wall Trail. The use of this trail is the primary recreational on the parcel of BLM lands. The China Wall Trail connects to trails within Eastern Rio Blanco Metropolitan Recreation and Park District (ERBM)-managed Jensen Park and Sanderson Hill Parks and Town of Meeker-managed Ute Park. This trail system consists of approximately 7 miles of trails managed for hiking and mountain biking use with are a variety of trail loop options that vary in length and difficulty. Recent use of the China Wall Trail has consisted of 300 to 500 trail users per month from May through October and 10 to 50 trail users per month during the other months. The recently approved Meeker Master Trails Plan (DOI-BLM-CO-NO5-2014-0116-EA) calls for the potential construction of up to an additional 5 trails for a combined 10 additional miles to the existing trail system. The first priority for trail construction is planned as Trail 1 (East Ridge Trail). This trail has the same alignment as approximately 0.50 miles of the northern portion of the proposed access road (Figure 4). There are also four miles of graveled roads on this parcel of BLM lands. These roads are not accessible to the general public because access through private property is needed to reach these roads.

5.13.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

Because the access road into the mine has the same alignment as approximately 0.50 miles of Trail 1 (East Ridge Trail), this would result in delaying trail construction activities by one season or by several months (Figure 2). This alignment was done intentionally in coordination with DRMS and BLM-WRFO staff to reduce the number of linear ground disturbances in this area from two to one. The Proposed Action includes that DRMS would work with BLM to establish the proper grade and alignment for their proposed trail system, upon demobilization and reclamation of the access road. This should result in reducing overall trail construction costs for

this section of trail. Because the trail corridor would likely be over 15 feet wide instead of a maximum planned eight feet wide, this portion of the trail may result in a diminished trail experience for some trail users in this area. Efforts would be made during reclamation of the access road to create an undulating and winding trail instead of a straight trail with a consistent grade to improve trail user experience and the aesthetic of the trail. Overall several growing seasons, it is likely that the access road reclamation activities would result in the Proposed Action blending with the surrounding landscape and not being noticeable to those using Trail 1. Because the roads used to access the staging area are not available without permission to cross private property, the Proposed Action is not expected to result in any other impacts to the recreation setting and recreational experiences in this area.

Cumulative Impacts

Combined with future planned trail construction activities in this area, the Proposed Action could delay the construction and recreational use of planned trails.

5.13.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

By not constructing any access road into the coal mine, there would be no impacts to recreation setting, experiences, or projects. Trail construction to expand the existing trail system could begin during the beginning of the 2015 season instead of late 2015 season or the next year.

Cumulative Impacts

This alternative would result in trail user benefits from any newly constructed trail being realized sooner than the Proposed Action alternative.

5.13.4. Mitigation Measures and Residual Impacts

By constructing the access road in the same area as future Trail 1 (East Ridge Trail) for approximately 0.50 miles, Proposed Action results in delaying planned hiking and biking trail construction activities by one season or by several months. The Proposed Action would result in a much wider trail corridor than what was planned for. Depending on reclamation success and the detailed trail alignment, this could result in a somewhat diminished trail user experience on this portion of future trail over several years until the ground disturbance from the access road becomes unnoticeable to trail users.

5.14. Access and Transportation

5.14.1. Affected Environment

The Proposed Action is located approximately one mile north of Meeker, CO in the upper portion of the Anderson Gulch drainage. Access to the site includes traveling approximately two miles west on State Highway (SH) 13 to SH 64, then approximately 0.5 miles west on SH 64 to a graveled private road that leads into Lion Canyon, then approximately 3 miles on this private road to BLM Road 1602A, then approximately one mile on BLM Road 1602A to BLM Road

1603, then approximately 0.2 miles to the staging area. From the staging area, an approximately 1.5 mile-temporary access road is proposed to access the mine fire, of which approximately 1 mile is located on BLM lands. The BLM roads are not accessible by the public because permission is needed to cross private property in order to reach these roads. These roads are used infrequently by communication site, transmission line, and Federal Aviation Administration site employees. Approximately 2.09 miles of BLM Roads 1603 and 1602A are proposed to be used as part of the future expansion of the existing trail system on this parcel of BLM lands.

5.14.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The Proposed Action is likely to result in a much higher use of BLM Road 1602A and a short portion of BLM Road1603 than is typical in most years. These roads are generally surfaced with gravel. There is potential for travel on these roads to result in maintenance being needed to return these roads to their former condition after the project has been completed. These roads need to remain in the same condition as before the project in order to provide access to those in need of use of these roads to access work sites. If damage by proposed vehicles and equipment and amount of travel results in any existing roads needing maintenance to be returned to the former condition, it is recommended that DRMS perform this maintenance after the project has been completed to return roads to their former condition. In order to prevent impacts to BLM Roads 1602A and 1603 when soils are saturated it is recommended that use of these roads shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer. This should prevent any degradation of the roads travel surfaces as a result of the Proposed Action and would serve to retain similar access for those that use these routes to access work sites.

The temporary access road to the mine is proposed and planned to not result in any additional access to BLM lands. Authorized individuals would be the only people that are able to use this road. This road would be in place for two to three months and is planned for and proposed for complete reclamation except in areas where there is an overlap with a future planned hiking and biking trail. Therefore, the Proposed Action would directly result in no new access to public lands. Indirectly, in areas where the road overlaps with future trail plans, only a 0.50 mile portion of the access road would be used as a future hiking and biking trail which would be reclaimed from a 15 foot wide road to a two wide trail in this area.

Cumulative Impacts

Combined with the existing use vehicle on the BLM Roads 1602A and 1603, the Proposed Action would likely result in a substantial increase in the volume of travel on these roads from August through October. This would be a temporary, short term impact to these roads.

5.14.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

There would be no new impacts to the BLM transportation system and access to public lands as result of the alternative.

Cumulative Impacts

No cumulative impacts have been identified as a result of this alternative.

5.14.4. Mitigation Measures and Residual Impacts

1. DRMS will perform road maintenance on BLM Road 1602A and a short portion of BLM Road 1603 after the project has been completed in order to return these roads to their former condition.
2. Use of BLM Roads 1602A and 1603 shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.

5.15. Realty Authorizations

5.15.1. Affected Environment

A short term right-of-way (ROW) would be required for construction of the temporary access road and staging area. Existing ROWs near the Proposed Action are described in Table 5.

Table 5. Existing ROWs in the Project Area

Case File	Holder	Authorized Use
COC34068	Qwest Corporation	Telephone line
COC39321	White River Electric Association	Power lines
COC74727		
COC0126162	Federal Aviation Administration	Vortac site and access road

5.15.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The access road that would be authorized in short term ROW COC77025 would be approximately long, averaging 15 feet wide, and contain approximately 2 acres. Short term ROW COC77025 would also include the staging area that would be an irregular shaped parcel of approximately 3 acres. Damage to the facilities or rights of existing ROW holders could occur if construction activities are not properly planned and other ROW facilities are not properly identified prior to construction.

Cumulative Impacts

The right-of-way for the access road and staging area would be short term and the areas would be reclaimed to BLM specifications when the Black Diamond Mine fire abatement project is complete; therefore the increase in ROW densities would be temporary.

5.15.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

Failure to authorize the proposed project would not result in any increased impacts to realty authorizations in the area.

Cumulative Impacts

There would not be any cumulative effects from not authorizing the proposed project.

5.15.4. Mitigation Measures and Residual Impacts

1. All activities would be required to comply with all applicable local, state, and Federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, implementing all applicable mitigation measures required by each permit, and effectively coordinating with existing facility ROW holders.

2. Construction activity should take place entirely within the areas authorized in the ROW grant.

3. At least 90 days prior to termination of the right-of-way, the holder shall contact the Authorized Officer to arrange a joint inspection of the right-of-way.

5.16. Hazardous or Solid Wastes

5.16.1. Affected Environment

There are no known hazardous or solid wastes on the subject lands. No hazardous materials or solid wastes are known to have been used, stored, or disposed of on federal land in the project area.

5.16.2. Environmental Consequences – Proposed Action

Direct and Indirect Impacts

The potential for harm to human health or the environment is presented by the risks associated with spills of fuel, oil, and/or hazardous substances used during construction and use of the access route. Other accidents and mechanical breakdowns of machinery are also possible. These activities may pose direct and indirect impacts to soil, water, air, and biological resources that occur in close proximity to individual disturbance features. Impacts to these resources may also occur at farther distances from individual disturbance features, though it is assumed that these impacts would be reduced because of proximity to the point source. Accidents and mechanical breakdown may also have direct and indirect effects to other resources depending on the type of accidents or mechanical breakdown and when and where they occur.

Cumulative Impacts

Effects to soil, water, air, and biological resources as a result of cumulative release of hazardous materials into the environment are unknown. Because some hazardous substances persist in the environment, it is reasonable to assume that multiple activities that may occur throughout the project area that result in the release of individual hazardous material spills or discharge events, may cumulatively result in impacts to soil, water, air, and biological resources. However, freshwater-bearing formations and other resources suitable for human use or consumption are isolated from man-made materials used in exploration activities, sodium recovery and oil, and gas operations through the use and cementing of surface casing, see 43 CFR 3162.5-2(d).

5.16.3. Environmental Consequences – No Action Alternative

Direct and Indirect Impacts

No hazardous or other solid wastes would be generated under the No Action Alternative.

Cumulative Impacts

No changes would occur that would have any cumulative impact to soils in the project area.

5.16.4. Mitigation Measures and Residual Impacts

1. Comply with all Federal, State and/or local laws, rules and regulations addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment. All spills or leakages of oil, gas, produced water, toxic liquids or waste materials, blowouts, fires, shall be reported by the operator in accordance with the regulations and as prescribed in applicable orders or notices.
2. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
3. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110 percent of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
4. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
5. As a reasonable and prudent lessee, acting in good faith, all lessees and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
6. As a reasonable and prudent right-of-way holder, acting in good faith, all lessees and right-of-way holders will provide for the immediate clean-up and testing of air, water

(surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

5.17. Colorado Standards for Public Land Health

In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. If there is the potential to impact these resources, the BLM will note whether or not the project area currently meets the standards and whether or not implementation of the Proposed Action would impair the standards.

5.17.1. Standard 1 – Upland Soils

Temporary reductions in soil surface infiltration characteristics will result from the excavation of the undisturbed hillslopes for the temporary road. The impacts to surface infiltration and subsequent rilling would be minimized by the implementation of temporary and permanent erosion control BMPs. Post-construction reclamation should reestablish pre-construction vegetation needed to generate litter cover and subsequent organic matter critical in restoring pre-disturbance water infiltration and permeability, increased moisture retention, and plant root mass necessary for soil retention and functionality.

5.17.2. Standard 3 – Plant and Animal Communities

Upland plant communities associated with this project are currently meeting this standard. Successful reclamation of the proposed access route would prevent any lasting negative effects to these plant communities.

5.17.3. Standard 4 – Special Status Species

The project area is currently meeting the land health standards for special status species. Water depletions associated with the project are covered under the BLM Colorado's Programmatic Biological Assessment (PBA) for water depleting activities (excluding fluid minerals development) on BLM lands in the Colorado River basin in Colorado (BLM 2008). The project, as proposed, would not be expected to detract from the continued meeting of Standard 4.

5.17.4. Standard 5 – Water Quality

No perennial surface or ground water expressions (springs) are located in or around the Proposed Action. As such, no anti-degradation to surface water quality or impacts to designated beneficial use of surface or groundwater are expected from the construction of the temporary road.

6. SUPPORTING INFORMATION

6.1. Interdisciplinary Review

Table 6. List of Preparers

Name	Title	Area of Responsibility	Date Signed
Keith Sauter	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Prime and Unique Farmlands	3/25/2015
Lisa Belmonte	Wildlife Biologist	Special Status Animal Species, Migratory Birds, and Aquatic and Terrestrial Wildlife	3/17/2015
Mary Taylor	Rangeland Management Specialist/Project Lead	Vegetation, Invasive, Non-Native Species, Wild Horses, Livestock Grazing	3/24/2015
Matt Dupire	Ecologist	Special Status Plant Species, Forestry and Woodland Products, Areas of Critical Environmental Concern	4/7/2015
Brian Yaquinto	Archaeologist	Cultural Resources, Paleontological Resources, Native American Religious Concerns	3/25/2015
Aaron Grimes	Outdoor Recreation Planner	Visual Resources, Lands with Wilderness Characteristics, Recreation, Access and Transportation, Wilderness, Scenic Byways	3/31/2015
Paul Daggett	Mining Engineer	Geology and Minerals, Hazardous or Solid wastes	4/15/2015
Stacey Burke	Realty Specialist	Realty Authorizations	4/6/2015
Kyle Frary	Fire Management Specialist	Fire Management	4/6/2015
Heather Sauls	Planning & Environmental Coordinator	NEPA Compliance	4/15/2015, 5/13/2015

6.2. Tribes, Individuals, Organizations, or Agencies Consulted

Consultation with the Colorado State Historic Preservation Officer was completed for the Proposed Undertaking on March 26, 2015. Letters to initiate tribal consultation were sent to the Eastern Shoshone Tribe, Northern Ute Tribe, Southern Ute Tribe, and Ute Mountain Ute Tribe on March 12, 2015.

6.3. References

Armstong and Wolny
1989 Armstrong, Harley J., and David G. Wolny, 1989 Paleontological Resources of Northwest Colorado: A Regional Analysis. Museum of Western Colorado. Grand Junction, Colorado.

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2013 Air Pollution Control Division, November - 2014, Colorado Air Quality Data Report , pg. 4, Colorado Department of Public Health & Environment.

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1979 Tweto, Ogden, Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia

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2009 Kolker, Allan, Engle, Mark, Stracher, Glenn, Hower, James, Prakash, Anupma, Radke, Lawrence, ter Schure, Arnout, and Heffern, Ed, 2009, Emissions from coal fires and their impact on the environment: U.S. Geological Survey Fact Sheet 2009–3084, 4 p. Emissions from Coal Fires and Their Impact on the Environment

APPENDIX A. FIGURES

Figure 1. Topographic and Surface Ownership Map

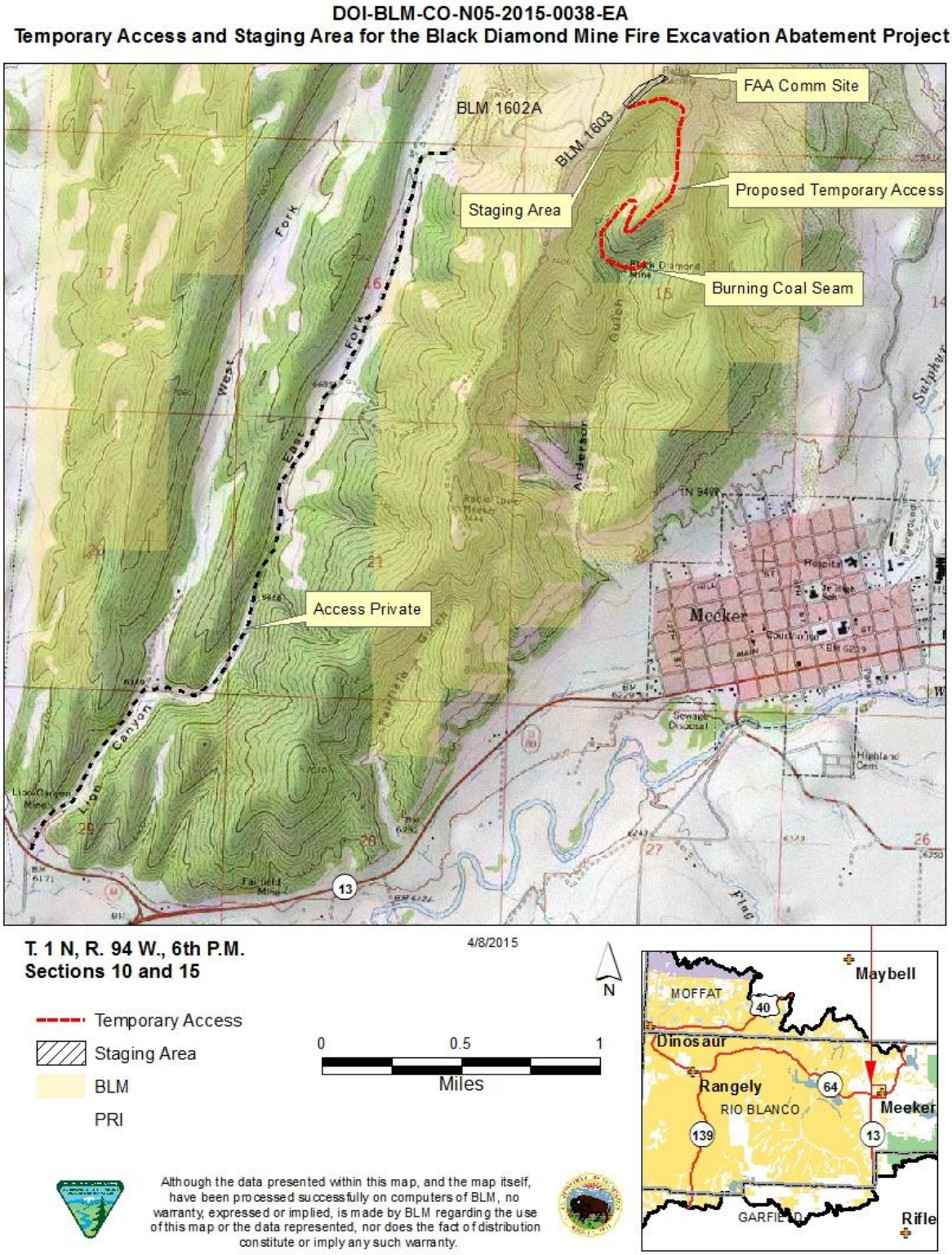


Figure 2. Aerial and Surface Ownership

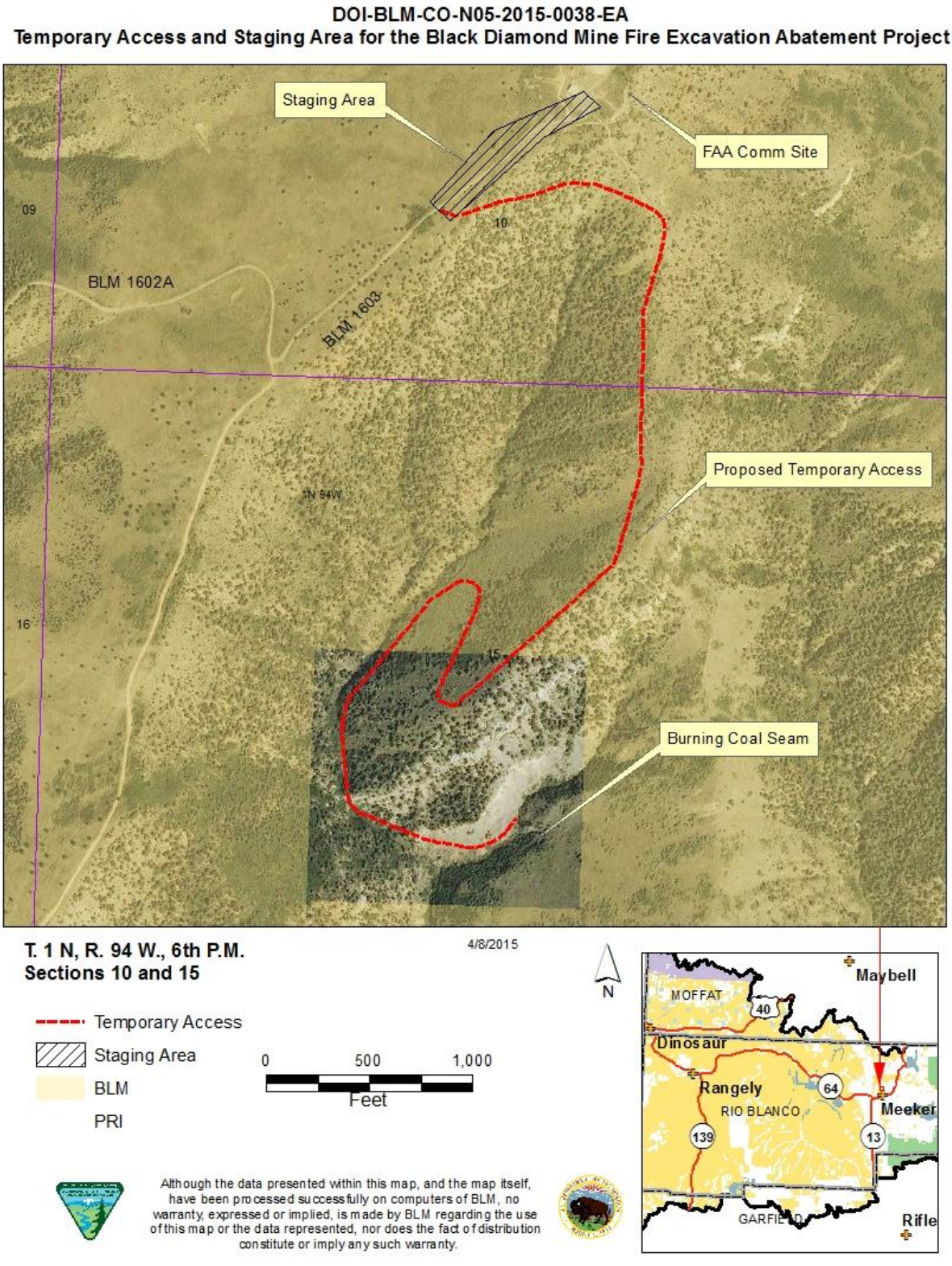


Figure 3. Future Trail 1 (East Ridge Trail) overlap with Proposed Access Road

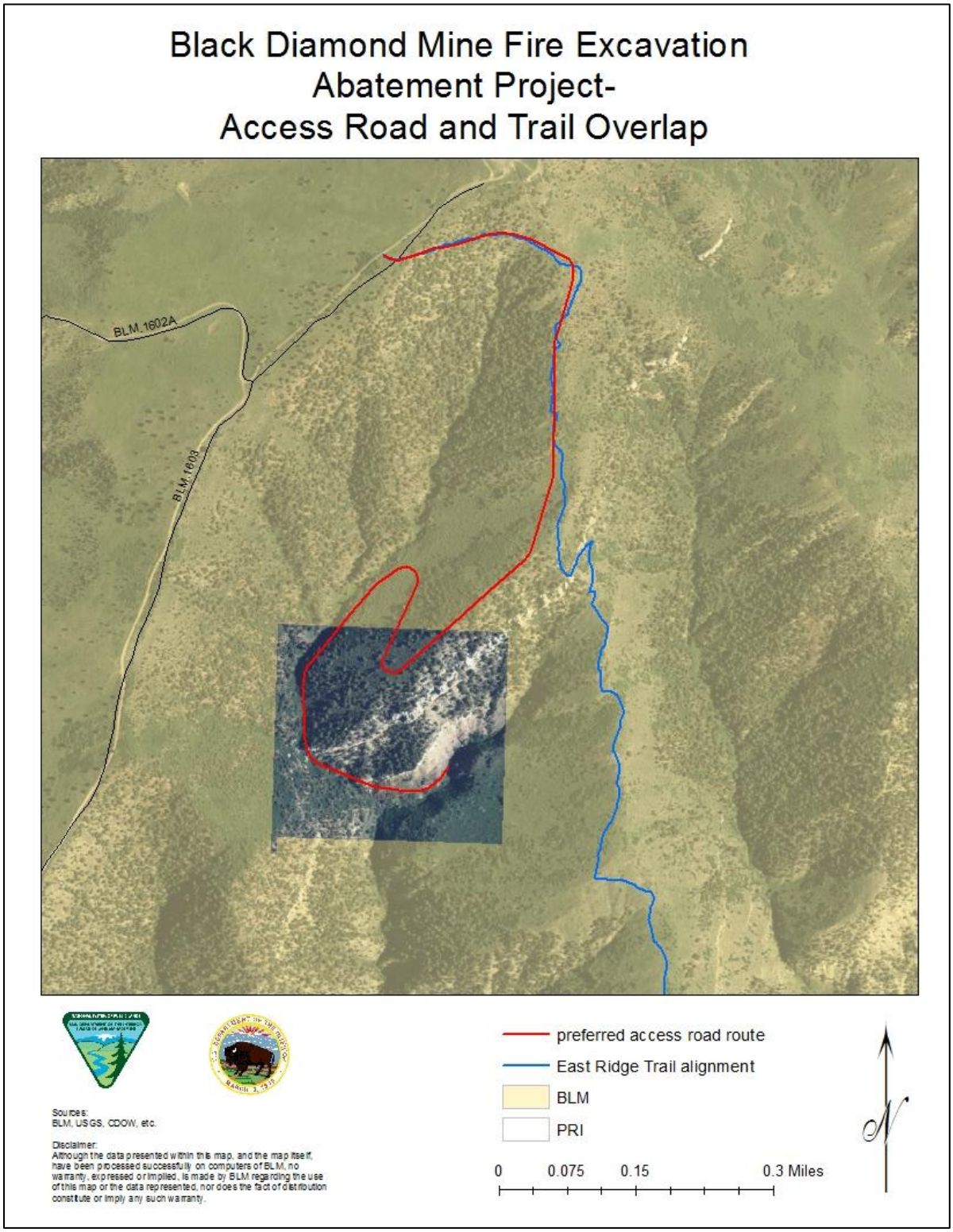
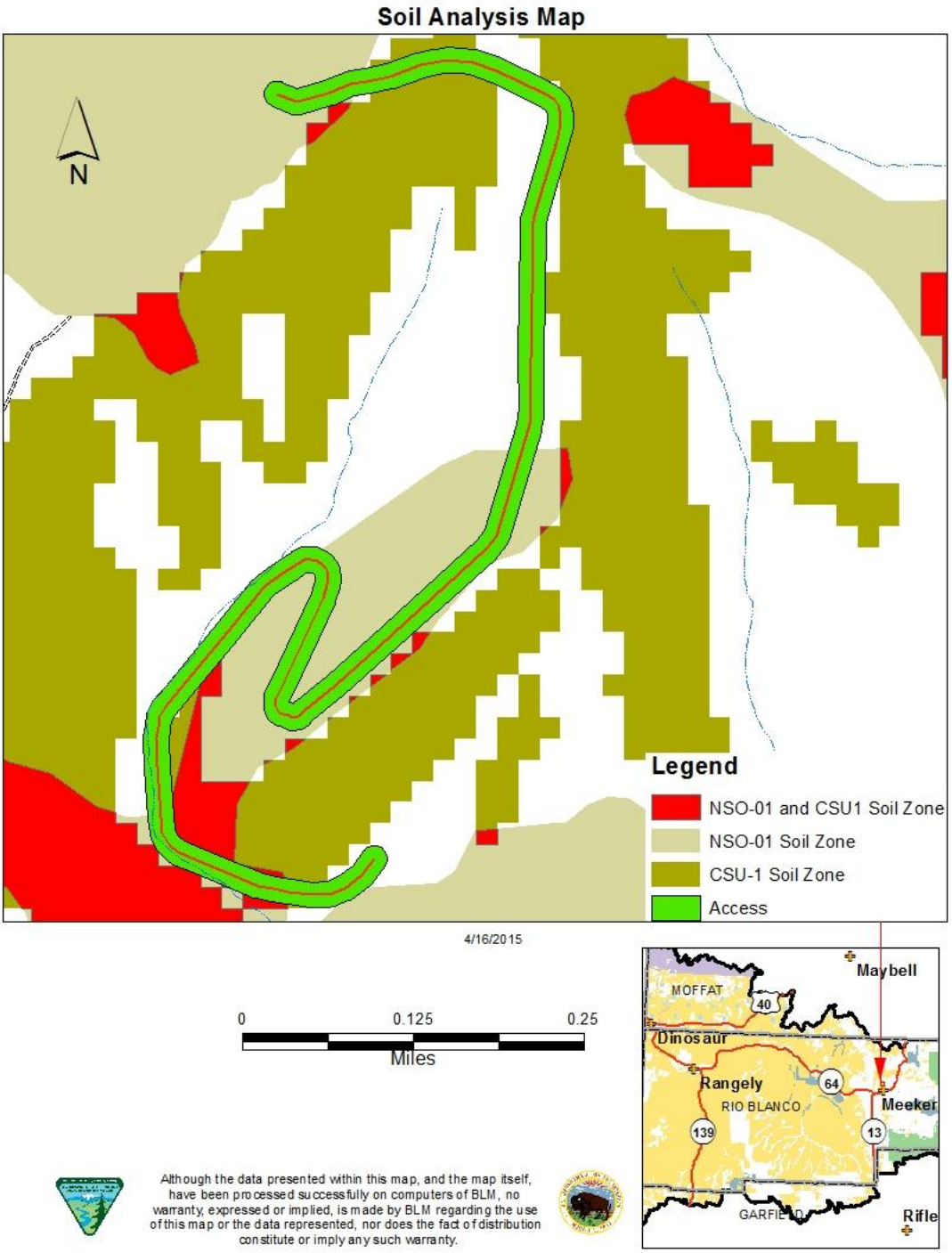


Figure4. Soil Analysis Map



APPENDIX B. RESPONSE TO COMMENTS

Regas Halandras was the only commenter responding during the comment period. The following table contains his comment and the BLM's response.

Issue or Resource	Comment	Comment Response
All of the temporary access should be integrated into trail system.	I would also think that the portion to the mine could enhance the current trail system; it is a short distance from the current trail and could make a nice loop among the current or proposed trails. There is a temporary road being done that will be removed and reclaimed when that very same reclaim work could incorporate a trail to the mine site and connect from there out to other points on the trail system.	Approximately 0.5 miles of the1.5 miles of temporary access would be repurposed as a portion of the hiking and bicycling trail identified as Trail 1 of the Meeker Trails Master Plan (DOI-BLM-CO-N05-2014-0116-EA). Implementation of the Meeker Trails Master Plan would incorporate over 20 miles of an interconnected trail system within a 2,000 acre parcel of BLM land. The proposed temporary access to the Black Diamond mine not included in the trail system since it traverses private land and was not considered as a feasible location for a trail during the planning stage of Meeker Trails Master Plan.